



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/961,929	10/31/97	CONRAD E	809-96-041

MM21/1208  
JAMES M LEAS  
INTELLECTUAL PROPERTY LAW DEPT 972-2E  
IBM CORPORATION  
1000 RIVER ROAD  
ESSEX JUNCTION VT 05452

EXAMINER  
MERLINO, A

ART UNIT  
2877

PAPER NUMBER

DATE MAILED: 12/08/98

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/961,929**

Applicant(s)  
**Conrad et al**

Examiner  
**Amanda Merlino**

Group Art Unit  
**2877**



☒ Responsive to communication(s) filed on Oct 31, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-28 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-28 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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***Information Disclosure Statement***

1. The information disclosure statement filed 10/30/97 fails to comply with 37 CFR 1.98(a)(2) with regard to document number AL (foreign patent 85/0567 WIPO), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. There is no copy of the patent in the file.

***Claim Rejections - 35 USC § 112***

2. Claims 19 and 21-26 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, the phrase "less than about .1" is indefinite and confusing. What is actually considered less than about .1 and what is the unit of measurement?

In claim 21, the phrase "less than about 5 degrees" is indefinite and confusing. What is actually considered less than about 5 degrees.

In claim 24, "the range of incident angles", "the range of incident wavelengths", and "the range of reflected angles" lack antecedent basis.

All dependent claims of the claims stated above are also rejected under 112 as carrying the same problems as stated above since they are dependent from the rejected claims.

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***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-18 and 20-28 rejected under 35 U.S.C. 102(b) as being anticipated by McNeil et al (5,164,790).

McNeil et al teach of an apparatus and method for measuring periodic structures on photo masks comprising a radiation (light) source (31) wherein polarized incident light may be used for illuminating the substrate (35) having a repeating structure, said substrate having a covering layer having a thickness and index of refraction and wherein the repeating structure comprises at least 5 lines, a detector (45) for measuring said intensity of diffraction radiation wherein the diffracted radiation is reflected, and a data processing machine (41) for mathematically (Maxwell's equation ...) predicting radiation intensity of a model and comparing said predicted intensity with said measured intensity.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNeil et al (5,164,790).

McNeil et al teach of an apparatus and method for measuring periodic structures on photo masks comprising a radiation (light) source (31) wherein polarized incident light may be used for illuminating the substrate (35) having a repeating structure, said substrate having a covering layer having a thickness and index of refraction and wherein the repeating structure comprises at least 5 lines, a detector (45) for measuring said intensity of diffraction radiation wherein the diffracted radiation is reflected, and a data processing machine (41) for mathematically (Maxwell's equation ...) predicting radiation intensity of a model and comparing said predicted intensity with said measured intensity.

McNeil lacks the teaching of a illuminating the substrate through a lens.

Official Notice is taken that the use of lens in an optical measuring device for directing illumination light unto a test device for focusing purposes and other advantages are old and well known in the art. See In Re Malcolm 1942C.D.589:543 O.G.440.

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**Conclusion**

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax Machine located in Crystal Plaza 4. The form of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is:*

**703-308-7722**

If the applicant wishes to send a Fax dealing with a Proposed Amendment for discussion for a phone interview then the fax should:

1) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Examiner Amanda H. Merlino* whose telephone number is (703) 305-3488.


Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-0956.

**Amanda H. Merlino**

**Patent Examiner**

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December 7, 1998/ahm

  
**ROBERT H. KIM**  
**PRIMARY EXAMINER**